

SECTION 6 - PROJECT DEVELOPMENT

DESIGN

Engineer's Design Report

This report is required to provide justification to the MoDOT Aviation Section for the design selections that have been made. Typically this report should include a brief narrative of the project, description of existing conditions, discussion of design parameters, discussion of testing results, design recommendation justification, pavement design (form 5100-1), and engineer's estimate of probable cost. It must be submitted for our review and approval before the plans and specifications are developed. Consult FAA Regional Guidance ACE-1330 for additional information.

Modifications to Standards

It is the policy of the FAA that all airport development under the State Block Grant Program conforms to FAA standards. For a specific project where unique local conditions preclude compliance with airport design or construction standards, modification of these standards may be considered.

FAA Order 5300.1E establishes guidelines and criteria for modification of standards and specifications, provided in current FAA Advisory Circulars, which are necessary to accommodate a unique local condition for a specific project. All modifications to design and construction standards must be submitted to and approved by the MoDOT Aviation Section prior to incorporation into projects funded through the State Block Grant Program. Consult FAA Regional Guidance ACE-1380 for additional information.

Storm Water Permit Requirements for Land Disturbance Activities

The sponsor is required to obtain a Missouri State Operating Permit for storm water discharge from the Missouri Department of Natural Resources (DNR) if construction activity disturbs land by grading, excavating or otherwise destroying the root zone, and the surface area disturbed is **five acres or more**. The application for the permit should be made early in the design process because it can take up to 90 days to be processed. A copy of this permit **must be submitted** to the MoDOT Aviation Section **prior to advertising for bids**.

To apply under a general permit, the sponsor must complete "[Form E - Application for General Permit](#)" and "[Form G - Application for Storm Water Permit Under the General Permit: Land Disturbance](#)" and submit them along with the required fee to DNR. The sponsor must also develop a Storm Water Pollution Prevention Plan (SWPPP) to address erosion and sediment control at your facility. We have developed an available model SWPPP that has been used on previous airport projects. Sponsors choosing to utilize this sample SWPPP are advised to read it carefully and delete any items that you will not perform. You may also wish to add items.

If you have any questions concerning the above referenced forms, you may contact DNR at 1-800-361-4827 or (573) 526-2929 or write them at the following address:

Missouri Department of Natural Resources
Division of Environmental Quality
Water Pollution Control Program
Permits Section
P.O. Box 176
Jefferson City, MO 65102-0176

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PLANS AND SPECIFICATIONS

Preparation of Project Plans and Specifications

FAA Regional Guidance ACE-1340 provides information to the sponsor for the development of project plans and specifications and associated bidding documents. This guidance ([Federal-Preparation of Project Plans and Specifications](#)) has been modified by MoDOT Aviation Section to include additional state requirements and must be used. While it is the intent of this guidance to identify and consolidate all required Federal laws, regulations, provisions, and executive orders, this guidance should not be construed as being all inclusive of such Federal requirements.

The sponsor shall note that this guidance is intended to assist in the development of contract documents and does not establish or mandate new requirements. The authority to mandate Federal requirements provided within resides with the implementing regulation, law, enactment or executive order as established by the legal implementing authority. In the event there are amendments to existing laws and regulations or enactment, the sponsor shall adhere to the requirements of the amended regulation or new enactment.

The sponsor is permitted to make modifications, additions, and variations to the plans, specification, and contract documents to accommodate local bidding practices; however, all mandated Federal provisions, clauses, notices and statements must be incorporated into the contract documents.

Per the State Block Grant Agreement, the sponsor is required to eliminate all deficiencies identified in the most recent annual safety inspection report (Airport Master Record 5010-1). If immediate elimination is not feasible, the sponsor shall provide a satisfactory plan to eliminate or address the deficiencies and include this plan with phased development as outlined in a current and approved airport layout plan.

While AC 150/5370-10A provides the required technical specifications for the State Block Grant Program construction projects, the FAA does allow the modification of several sections of this AC to permit the use of state materials. For asphalt pavement projects designed to accommodate aircraft gross weights of 12,500 pounds single wheel gear (SWG) or less, the engineer must incorporate the MoDOT Aviation Sections version of the MO-401F. For concrete pavements designed to accommodate aircraft gross weights of 30,000 pounds SWG or less, the engineer must incorporate the MoDOT Aviation Sections version of the MO-501.

There are several other sections of AC 150/5370-10A which have been modified and must be used on State Block Grant Program projects. They are as follows: MO-152, MO-209, MO-602, MO-603, MO-610, MO-620, MO-701, MO-706, MO-901, AND MO-908. Any modifications to these standards including the MO-401F and MO-501 must be approved by the MoDOT Aviation Section prior to acceptance of the project specifications. These modified project specifications are located under **MoDOT Construction Specifications** at the following link: [Grant Documentation](#).

All other technical specifications related to items other than those listed above shall be obtained from AC 150/5370-10A. Approved modifications to these standards are provided in FAA Regional Guidance ACE-1370. Inclusion of these modifications in these project specifications is required by Central Region, and therefore do not require a request for approval of modifications to standards. All other modifications to standards including omission of the regional modifications must be approved by the MoDOT Aviation Section prior to acceptance of project specifications.

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For plan development, one area of concern is an appropriate Safety Plan. For airports receiving federal funds through the State Block Grant Program, it is mandatory that the requirements of AC 150/5370-2C are satisfied. Specific requirements may vary per category of airport and type of construction project. Sponsors bear the ultimate responsibility for ensuring that safety provisions are established and implemented. Below is a partial listing of Safety Plan requirements:

- Indicate scope of work
- Delineate limits of work area
- Identify potential hazards and barricade requirements
- Indicate potential staging area and haul routes
- Identify temporary closures and displacements
- Specify temporary marking and lighting requirements
- Address phasing requirements
- Identify vehicular operation requirements
- Identify radio communication requirements
- NOTAM issuance including Navaid shutdowns, operating restrictions, etc.
- Identify runway safety area (RSA), object free area (OFA), object free zone (OFZ), and Navaid critical areas
- Requirements for flagmen and air operations area (AOA) security
- Control of foreign object debris (FOD)

Review Submittal - Plans and Specifications

As the sponsor, you are responsible for ensuring that the plans and specifications and contract documents satisfy the minimum FAA and MoDOT Aviation Section requirements. As an aide to your plan review, the sponsor may utilize the [Construction Plans Checklist](#). After your review is complete, submit **one set** of the 100% plans and specifications to the MoDOT Aviation Section for review and concurrence. Please allow four weeks for review.

As required by the rules of Missouri Board for Architects, Professional Engineers and Land Surveyors, the registered professional engineer shall place his/her personal seal or rubber stamp, affix his/her signature on or through the seal, and place the original date under the seal, at the minimum, to the original of each sheet in a set of plans, specifications, and other documents which were prepared by the professional engineer or under the professional engineer's immediate personal supervision. For the specifications and contract documents, the registered professional engineer, when more than one sheet is bound together in one volume, may sign, seal and date only the index sheet, providing that the signed sheet clearly identifies all of the other sheets comprising the bound volume.

Sponsor/Consultant Response to MoDOT Aviation Section Comments

The MoDOT Aviation Section generally does not require an additional review of the plans and specifications and contract documents provided that each of our review comments are satisfactorily addressed individually in writing. Failure to do this will delay acceptance of the final bid package until MoDOT Aviation Section thoroughly conducts another review.

The MoDOT Aviation Section's review does not relieve the sponsor, nor the engineer for accuracy, technical content, or completeness of the plans and specifications and contract documents. Our cursory review may not determine all deficiencies and we recommend that you and your consultant perform a detailed review prior to the submittal of the final bid package. Your attorney should also review the contract documents to ensure that the sponsor's interests are adequately protected.

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Final Plans and Specifications

Upon acceptance of the final bid package from the MoDOT Aviation Section, the sponsor must submit the following items prior to receiving authorization to advertise for bids:

- Two sets of the final bid package.
- Updated engineer's estimate of probable costs.
- Executed [Sponsor Certification for Project Plans and Specifications](#).

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BIDDING

Advertising for Construction Bids

The sponsor shall not advertise for construction bids until written authorization from the MoDOT Aviation Section is received. Failure to obtain written approval may jeopardize federal funding participation.

Construction that is to be accomplished by contract is to be competitively bid in accordance with federal procurement requirements (49 CFR Part 18) for projects estimated to exceed \$100,000, bid notices should be published in a qualified (local or area) newspaper or other advertisement publication located in the same county as the airport project as a minimum. The time frame for advertising should be sufficient for a reasonable bid preparation time. For larger projects we typically see a two to four week advertisement. For smaller simple projects, one to two weeks may be adequate. We also recommend that the sponsor do a direct mailing to qualified contractors that have done airport work.

Pre-Bid Meeting

A pre-bid meeting shall be conducted by the sponsor's engineer for all State Block Grant Program projects in an effort to clarify and explain any specific project issues or requirements of the contract. The meeting should be held a minimum of ten days prior to the bid opening date.

Any changes or modifications approved during the conference shall be included in an addendum to the bid documents. A copy shall be furnished to each prospective bidder who purchased bid documents, including those who did not attend the meeting.

Copies of the proceedings, containing all items discussed and resolved, including responses to questions, shall be made available to each of the participants upon request. Consult AC 150/5300-9A "Predesign, Prebid and Preconstruction Conferences for Airport Grant Projects" for additional information.

Bid Opening

The sponsor/consultant is responsible for tabulating the bids and analyzing each bid. Bids should be reviewed for reasonableness of costs, bid improprieties and unbalanced bids.

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NOTICE OF AWARD

Upon completion of the bidding process, the sponsor must submit the following items to the MoDOT Aviation Section for review and concurrence prior to awarding the contract:

- ➔ One copy of the bid tabulation.
- ➔ One copy of the proposed DBE participation form.
- ➔ Letter of recommendation for award from sponsor.
- ➔ Executed [Sponsor Certification for Equipment/Construction Contracts](#).

The sponsor shall not award the construction contract until written authorization from the MoDOT Aviation Section is received. Any development work accomplished prior to our concurrence will be grant ineligible and must be funded 100% by the sponsor.

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NOTICE TO PROCEED

After the notice of award has been issued for the construction contract, the sponsor must complete and submit the following items to the MoDOT Aviation Section for review and concurrence prior to issuing the notice to proceed:

- Copy of the Notice of Award.
- Engineering Agreement for Construction Services with a letter stating the sponsor's recommendation for approval.
- The engineer's Construction Observation Program (*Federal-Standards for Construction Observation Services*)(*Construction Observation Program-Required Tests and Certifications*) (should be submitted to us 10 days prior to the preconstruction meeting, so that we will have time to review it).
- Provide an executed copy of the contract documents including the bid proposal, construction contract, DBE forms, bonds, insurance, etc.

Also, prior to issuing the notice to proceed, the sponsor must **hold a preconstruction meeting**. We request a minimum 10 days advanced notice so that we may notify the FAA. Consult AC 150/5300-9A "Predesign, Prebid and Preconstruction Conferences for Airport Grant Projects" for additional information.

The sponsor shall not issue the notice to proceed to the contractor until written authorization from the MoDOT Aviation Section is received. Any development work accomplished prior to our concurrence will be grant ineligible and must be funded 100% by the sponsor.

CONSTRUCTION ISSUES

NOTAMS

It is the responsibility of the sponsor to issue, through the applicable FAA Flight Service Station (FSS), any and all Notices to Airmen (NOTAMS) that may be required. It is recommended that the sponsor and the contractor coordinate this action well in advance of any construction activity in order to avoid delays. Do not wait until the morning the contractor wants to start working. For larger projects, it is recommended a letter be sent to the FSS manager in advance containing information about the project scope, anticipated NOTAMS, and project schedule. This action will not replace the need for individual NOTAMS to be issued, but will help FSS plan for the project and allow them the opportunity to provide guidance on issuing project NOTAMS.

Required Notices to be Posted

The contracts for construction projects require that certain information be posted at all times by the contractor and its subcontractors at the site of work in a prominent and accessible place where it can easily be seen by the workers. No work should be allowed to begin until this task is accomplished. The following is a list of required information to be posted on the project bulletin board:

1. State and Federal Wage Rates
2. Notice To All Employees (WH Publication 1321)
3. Equal Employment Opportunity is THE LAW
4. State of Missouri, Discrimination in Employment

For item 1, the contractor shall post the applicable state and federal wage rates, which were included in the bid proposal. Items 2 through 4 above will be provided to the contractor by the MoDOT Aviation Section at the preconstruction meeting. The sponsor's on-site construction observer shall verify that the contract wage rates and the required notices are posted. This item is typically last on the contractors mind and is often overlooked.

Safety Plan

During the full term of the project, the sponsor is ultimately responsible for proper implementation of the contractor's safety plan. Sponsors could be found at fault for failing to monitor the contractor's conformance to the approved safety plan.

Wage Rate Interviews

The sponsor is responsible for ensuring that [*Weekly Wage Rate Interviews*](#) are conducted with the workers to ensure that they are receiving the established prevailing wages. As provided for in the Engineering Agreement for Construction Services, this task is delegated to the on-site construction observer. Results of these interviews shall be submitted to the MoDOT Aviation Section with the weekly construction progress and inspection reports.

DBE Compliance Reviews

The sponsor is responsible for ensuring that [*Weekly DBE Compliance Interviews*](#) are conducted with the workers to ensure that the portion of the work identified in the construction contract to be performed by DBE firms is so performed. As provided for in the Engineering Agreement for Construction Services, this task is delegated to the on-site construction observer. Results of these interviews shall be submitted to the MoDOT Aviation Section with the weekly construction progress and inspection reports.

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Weekly Construction Progress and Inspection Reports

The sponsor is responsible for providing and maintaining adequate, competent and qualified engineering supervision and construction inspection personnel at the project site during all stages of the work to ensure that the completed work conforms with the project plans and specifications.

The sponsor shall require their on-site construction observer to keep daily construction records.

A [*Weekly Construction Progress and Inspection Report*](#), including a summary of tests completed, shall be submitted to the MoDOT Aviation Section.

Change Orders and Supplemental Agreements

All [*Change Orders and Supplemental Agreements*](#) must be submitted to the MoDOT Aviation Section for review and approval prior to implementation to ensure funding eligibility. Please read the instructions on completing the forms carefully because any forms submitted that do not follow the format will be returned unapproved.

Outlay Report and Request for Reimbursement

Payments to the sponsor are made on a reimbursement basis. The sponsor may request incremental payments during the course of the project or a lump sum payment upon completion of the work. Requests for reimbursement ([*Outlay Report and Request for Reimbursement \(Form 271\)\(Manual\)*](#)) shall be supported with paid invoices and copies of checks.

Final Inspection

Upon project completion, the sponsor shall arrange a final inspection with representatives of the engineer, contractor, and MoDOT Aviation Section. A report shall be generated that documents the results of the final inspection.

PROJECT CLOSEOUT

Within ninety (90) days of final inspection of the project, the sponsor must submit the following project closeout documentation to the MoDOT Aviation Section for review and approval:

- *Contractor's Certification Regarding Settlement of Claims*
- Certification letter (*Sample Certification Letter from Prime Contractor Regarding DBE's*) from the prime contractor for each individual DBE firm's work attesting to the actual work performed by the DBE firm and the amount paid the DBE firm. This certification must be signed by both the prime contractor and the DBE firm.
- One set of record drawings (each sheet must be sealed, signed, and dated by the engineer)
- One sealed final testing summary which follows the checklist provided in the engineering services agreement for construction inspection
- Final *Change Order and Supplemental Agreement* (if applicable)
- Final *Outlay Report and Request for Reimbursement (Form 271)(Manual)* for Construction Programs
- Executed *Sponsor Certification for Construction Project Final Acceptance*

We would like to note that it is very important for the sponsor to complete the project closeout within the allotted time above. Failure to do so could result in the cancellation of the grant per item 20 of the State Block Grant Agreement (SBGA). Also, after grant closure, the sponsor is still responsible for airport compliance, assurances, leases and the obligations of the SBGA.